

SOV/79-29-1-69/74

Steroids. II. Synthesis of Progesterone From Solasodine

other not identified by-products. No details as to reaction conditions and yield were given. It must be emphasized that the transformation of (I) into (IV) can take place in three stages without by-products, however, the exact reaction procedure has hitherto not been found. In contrast with the acetate of the structurally close diosgenine in the case of heating solasodine with acetic acid anhydride the result is not compound (IV) but a completely resinified product. It was found that the oxidizing separation of the double bond (II) \rightarrow (III) takes place most favorably by oxidation with $\text{Na}_2\text{Cr}_2\text{O}_7$ in acetic acid at room temperature. It is possible to carry out the separation of the side chain under formation of the $\Delta^{16(17)}$ double bond (III) \rightarrow (IV) in an alkali as well as in an acid medium. In the case of an acid medium the reaction of solasodine into the final product (IV) occurs very smoothly. The yield in the latter amounted to 44% as calculated for (I). This compound is not only the initial product for the synthesis of progesterone and cortisone but also of other steroid hormones (Refs 6-8). The further transformation of (IV) into progesterone was carried

Card 2/3

SOV/79-29-1-69/74

Steroids. II. Synthesis of Progesterone From Solasodine

out according to Butenandt, Schmidt-Thomé, Oppenauer
(Refs 9,10). There are 13 references, 4 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevti-
cheskiy institut imeni S. Ordzhonikidze (All-Union Scientific
Chemo-Pharmaceutical Research Institute imeni
S. Ordzhonikidze)

SUBMITTED: November 1, 1957

Card 3/3

SUVOROV, N.N.; SOKOLOVA, L.V.; MAKAROV, N.V.

Reaction between methylmagnesium iodide and steroid ketoxides.
Izv. AN SSSR.Otd. khim. nauk no.12:2257-2258 D '60. (MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut im.S.Otdzhonikidze i Institut khimii prirodnikh soyedineniy
AN SSSR.

(Magnesium compounds)

(Steroids)

SUVOROV, N.N.; NOVIKOVA, V.M.; SOKOLOVA, L.V.; KOVYLKINA, N.F.

Microbiological transformation of cortisone with the aid of
mycobacteria B₅. Med.prom. 14 no.1:22-24 Ja '60. (MIRA 13:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S. Ordzhonikidze.
(CORTISONE)

SOKOLOVA, L.V.

Scientific conference on "study, preparation, and use of steroid
hormones." Med. prom. 14 no.7:62-64 Je '60. (MIRA 13:8)
(HORMONES--CONGRESSES)

SUVOROV, N.N.; NIKIFOROVA, O.K.; SOKOLOVA, L.V.; KOVYLKINA, N.F.; LEYBEL'MAN, F.Ya.

New synthesis of Reichstein's substance "S." Med.prom. SSSR 14 no.12:
9-12 D '60. (MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S. Ordzhonikidze.
(CORTICOSTERONE)

SUBOROV, N.V.; SOKOLOVA, L.V.; RYZHKOVA, V.M.; ZAYKINA, D.M.

Microbiological deacetylation of corticosteroid 21-acetates.
Dokl.AN SSSR 132 no.6:1325-1326 Je '60. (MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut im. S.Ordzhonikidze. Predstavleno akademikom M.M.
Shemyakinym.

(Corticosteroids)

SUVOROV, N.N.; SOKOLOVA, L.V.; MAKAROV, N.V.

Interaction between organolithium compounds and steroid keto oxides.
Izv.AN SSSR.Otd.khim.nauk no.5:934, My '61. (MIRA 14:5)

1. Nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im.
S.Ordzhonikidze i Institut khimii prirodnkh soyedineniy AN SSSR.
(Lithium organic compounds) (Steroids)

FEDOROVICH, M.M.; CHEREYSKAYA, N.N.; SOKOLOVA, L.V.; TOBELKO, I.L.

Computation of the technical and industrial plan of a chemical enterprise by the method of matrix calculus. Khim. prom. no.9: 44-49 S '61. (MIRA 15:1)

1. Moskovskiy inzhenerno-ekonomicheskii institut imeni Sergo Ordzhonikidze.

(Chemical plants)

SOKOLOVA, L.V.; KOVYLKINA, N.F.; SUBOROV, N.N.

Production of Δ^1 -dehydrocortisone from dihydrocortisone
acetate. Med. prom. 15 no.6:15-17 Je '61. (MIRA 15:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsev-
ticheskiy institut imeni S. Ordzhonikidze.
(PREGNADIENETRIONE)

SUVOROV, N.N.; SOKOLOVA, L.V.; YAROSLAVTSEVA, Z.A.; OVCHINNIKOVA, Zh.D.
Murasheva, V.S.; LEYBEL'MAN, F.Ya.

Steroids. Part 15: Synthesis of cortisone-acetate from 3 -pregnane-
17 -diol-11,20-dione. Zhur. ob. khim. 31 no. 11:3715-3718 N '61.
(MIRA 14:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S. Ordzhonikidze.
(Cortisone) (Pregnanediol)

SUVOROV, N.N.; SOKOLOVA, L.V.; RYZHIKOVA, V.M.; DVORYANTSEVA, G.G.

Microbiological 20 α -reduction of keto steroids with the aid of
Bacillus megatherium. Dokl. AN SSSR 152 no.5:1130-1131 O '63.
(MIRA 16:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut im. S.Ordzhonikidze i Institut khimii prirodnikh
soyedineniy AN SSSR. Predstavleno akademikom M.M.Shemyakinym.

med. 34, 1971.

The seasonal periodicity of the mitotic cell division and glycogen content in the liver of white rats. *Biol. dokl. Biol. med.* 32 no. 7: 98-100, 31 '64. (MIRA 1812)

L. Laboratoriya gistofiziologii (zav. - kand. biologicheskikh nauk V.N. Dobrokhin) Institut eksperimental'noy biologii (dir. - prof. L.N. Myshkiy) AMN SSSR, Moscow. Submitted July 30, 1963.

L 27419-66

ACC NR: AP6017695

SOURCE CODE: UR/0220/65/034/003/0407/0410

AUTHOR: Ryzhkova, V. M.; Sokolova, L. V.; Suvorov, N. N.

ORG: All-Union Chemical and Pharmaceutical Scientific Research Institute im. S. Ordzhonikidze (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut)

TITLE: Deacetylation of steroid acetates by means of *Bacillus megatherium*

SOURCE: AN SSSR. Mikrobiologiya, v. 34, no. 3, 1965, 407-410

TOPIC TAGS: bacteria, bacteriology, enzyme

ABSTRACT: *Bac. megatherium* was found to possess high esterase activity with respect to the acetyl group in the 21st position of the steroid molecule. Acetyl groups in positions 3-beta and 17-beta were deacetylated rather slowly by the microorganism. The steroid esterase of *Bac. megatherium* was quite inert with respect to the 11 alpha-acetylhydroxy group. The process of deacetylation of the acetyl groups in position 20 was found to be stereospecific. The alpha-orientation of the acetyl group made it inaccessible to the esterase of *Bac. megatherium*, whereas the beta-oriented acetyl group was deacetylated as easily as the 21-acetyl group. Orig. art. has: 1 formula and 1 table. [JPRS]

SUB CODE: 06 / SUBM DATE: 31May64 / ORIG REF: 001 / OTH REF: 012

Card 1/1

UDC: 576.8:577.153

L 29364-66 ENT(1)/ETC(f) IJP(c) AT

ACC NR: AP6018053

SOURCE CODE: UR/0020/66/168/003/0554/0555

AUTHOR: Malyshev, G. M.; Ostrovskaya, G. V.; Razdobarin, G. T.; Sokolova, L. V.

ORG: Physicotechnical Institute im. A. F. Ioffe, Academy of Sciences SSSR (Fiziko-
tekhnicheskii institut Akademii nauk SSSR)

TITLE: Determination of temperature and electron concentration in a plasma arc from
Thompson scattering of laser radiation

SOURCE: AN SSSR. Doklady, v. 168, no. 3, 1966, 554-555

TOPIC TAGS: laser, electron density, plasma arc, ~~Thompson scattering~~, plasma diag-
nostics

ABSTRACT: The temperature and electron concentration in a d-c plasma arc in a mag-
netic field were determined from the scattering of laser radiation. The experimental
arrangement is shown in Fig. 1. The duration of the 25-j ruby laser operating at

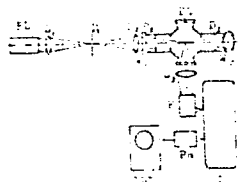


Fig. 1. Experimental arrangement

RL - Ruby laser; L₁, L₂, L₃ - lenses; D₁, D₂, D₃ -
diaphragms; W₁, W₂ - windows; DT - discharge tube;
P - prism; M - monochromator; PH - photomultiplier;
OSC - oscillograph.

UDC: 533.9.07

Cord 1/3

L 29364-66

ACC NR: AP6018053

$\lambda = 6943 \text{ \AA}$ was 0.5 μsec . The 800-Oe magnetic field was parallel to the discharge axis. The laser radiation was observed at a 90° angle from the incident radiation. This radiation was collected by lens L_3 from a volume 7 mm long and 0.6 mm in diameter into a solid angle of $1/32$ steradian. The discharge tube had a 50-mm diameter. The plasma under investigation was at the center of the discharge tube, 140 mm from the cathode. The laser pulse was activated in the middle of the discharge, the duration of which was several dozen seconds. The pressure of the helium flow in the tube was 0.2 mm Hg. Rayleigh scattering was used to calibrate the system. The slit width of the monochromator was 10 \AA . The experimental results are shown in Fig. 2.

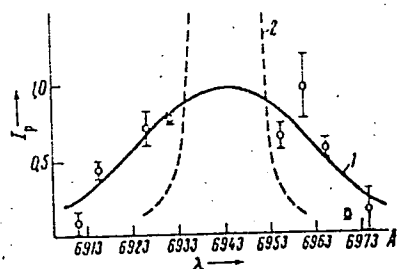


Fig. 2. The curve of the laser radiation scattered by electrons (1) and the curve of parasitically scattered light (2)

The electron temperature determined from the halfwidth of the curve of Fig. 2 was $T_e = 1.8 \text{ eV}$. The electron concentration was determined to be $2.5 \times 10^{13} \text{ cm}^{-3}$.

Cord 2/3

L 29364-66

ACC NR: AP6018053

Since the parameter α (The Physics of Fluids, no. 8, 1965, p. 208) was calculated to be much smaller than 1, the scattering of laser radiation by electrons was attributed to Thompson scattering. Orig. art. has: 2 figures. [CS]

SUB CODE: 20/ SUBM DATE: 13Jul65/ ORIG REF: 003/ OTH REF: 006/ ATD PRESS: 5008

Card 3/3 *cl*

SKRYABIN, G.K.; ZVIAGINTSEVA, I.S.; SOKOLOVA, L.V.

Transformation of hydrocortisone, cortisone and their
derivatives by a culture of Mycobacterium sp. 193. Izv.
AN SSSR. Ser. biol. no.5:715-720 S-O '64. (MIRA 17:9)

1. Institut mikrobiologii AN SSSR, Moskva.

RYZHKOVA, V.M.; SOKOLOVA, L.V.; SUVOROV, N.N.

Deacetylation of steroid acetates with the help of *Bacillus megaterium*. Mikrobiologiya 34 no.3:407-410 My-Je '65.

(MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.

SKRYABIN, G.K.; ZVYAGINTSEVA, I.S.; NAZARUK, M.I.; SOKOLOVA, L.V.

Effect of oxidation-reduction potential on the transformation of
hydrocortisone by the Mycobacterium globiforme 193 culture. Dokl.
AN SSSR 161 no.2:472-474 Mr '65. (MIRA 18:4)

1. Institut mikrobiologii AN SSSR. Submitted October 2, 1964.

SOKOLOVA, L.V.

Mitotic activity in white rats during medication sleep. Biul.
eksp.biol. i med. 48 no.7:95-99 J1 '59. (MIRA 12:10)

1. Iz laboratorii gistofiziologii (zav. - kand.biolog.nauk V.N.
Dobrokhotov) Instituta eksperimental'noy biologii (dir. - prof.
I.N.Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'ny
chlenom AMN SSSR N.N.Zhukovym-Verezhnikovym).
(CELL DIVISION)
(SLEEP)

SOKOLOVA, L.V.

Change in the mitotic activity in injured rat corneal epithelium during medication sleep. Biul.eksp.biol.i med. 53 no.6:77-80 '62. (MIRA 15:10)

1. Iz laboratorii gistofiziologii (zav. - kand.biologicheskikh nauk V.N.Dobrokhotoy) Instituta eksperimental'noy biologii (dir. - prof. I.N.Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nyy chlenom AMN SSSR N.N.Zhukovym-Verezhnikovym.
(SLEEP THERAPY) (KARYOKINESIS) (CORNEA)

MALYSHEV, G.M.; RAZDOBARIN, G.T.; SOKOLOVA, L.V.

Use of an electron-optical light amplifier with a Fabry-Perot etalon
and a monochromator for time scanning of the spectrum. Dokl. AN SSSR
145 no.4:768-770 Ag '62. (MIRA 15:7)

1. Fiziko-tekhnicheskiy inġstitut im. A.F.Ioffe AN SSSR.
Predstavleno akademikom B.P.Konstantinovym.
(Electron optics) (Spectrum analysis)

SOKOLOVA, L.V.; RYZHKOVA, V.M.; SKRYABIN, G.K.; SUVOROV, N.N.

Structure of a product of microbiological conversion of
cortisone by means of Mycobacterium B5. Med. prom. 15
no.11:29-31 N '61. (MIRA 15:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S.Ordzhonikidze.
(CORTISONE) (MYCOBACTERIUM)

MALYSHEV, G.M.; RAZDOBARIN, G.T.; SOKOLOVA, L.V.

Use of a Fabry-Perot etalon with a monochromator and an electron-optical amplifier for time-base scanning of the spectrum. Zhur.tekh.fiz. 33 no.2:191-199 F '63. (MIRA 16:5)

1. Fiziko-tekhnicheskiy institut AN SSSR imeni A.F.Ioffe, Leningrad.

(Interferometer) (Amplifiers (Electronics))
(Monochromator)

DOBROKHOTOV, V.N.; MARKELOVA, I.V., SOKOLOVA, L.V., TIMASHKEVICH T.V.;
NIKANOROVA, R.I.; KURDYUMOVA, A.G.

Effect of sarkolysine on the 24-hour periodicity of mitoses in
some tissues of white rats. Biul. eksp. biol. i med. 57 no.3:
97-102 Mr '64.

(MIRA 17:11)

1. Laboratoriya gistofiziologii (zav. - kand. biol. nauk V.N.
Dobrokhotov) Instituta eksperimental'noy biologii (dir. - prof.
I.N. Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'ny
chlenom AMN SSSR N.N. Zhukovym-Verezhnikovym.

DOBROKHOTOV, V.N.; MARKELOVA, I.V.; SOKOLOVA, L.V.; TIMASHKEVICH, T.B.;
NIKANOROVA, R.I.; KURDYUMOVA, A.G.

Effect of the time of injection of sarcolysine on the change in
the mitotic activity of the tissues of white rats. Trudy MOIP.
Otd. biol. 11:165-185 '64. (MIRA 18:1)

1. Laboratoriya gistofiziologii Instituta eksperimental'noy
biologii AMN SSSR.

GERSHUN, M.Y. [Hershun, M.I.]; SOKOLOVA, L.Yu.

Some potentials for the increase of labor productivity in the enterprises of the light industry of the former Lugansk Economic Council. (MIRA 16:4)
Leh.prom. no.1:86-87 Ja-Mr '63.

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy promyshlennosti (for Gershun). 2. Byvshiy Luganskiy sovet narodnogo khozyaystva (for Sokolova).

VERESHCHAGIN , I.[translator]; BAZUTKIN , V.[translator]; SOKOLOVA, M.....
[translator]; RAZEVIK, D.V., red.; ZHAKOV, Ye., red.;
DOTSENKO, V., tekhn. red.

[Plasma and electrostatic rocket engines] Plazmennye i elektro-
sticheskie raketnye dvigateli. Moskva, Izd-vo inostranoi
lit-ry, 1962. 168 p. Translated from the (MIRA 16:6)
English.

(Rockets (Aeronautics))

SONOLOVA, M. A.

"Topographo-anatomic data on the innervation of suprarenals and kidneys in cattle",
(CBS, Department of Normal Anatomy). Collected Works No. 14, of Leningrad Veterinary
Institute USSR Ministry of Agriculture, P 150, Sel'khozgiz, 1954.

USSR/Diseases of Farm Animals - Diseases Caused by Protozoa

R

Abs Jour : Ref ZhurBiol., No 5, 1959, 21428

Author : Sokolova, M.A.

Inst : Turkmen Institute of Abiculture

Title : The Blood's and Liquor's Sugar Levels in an Experimental Trypanosomosis of Camels (Su-auru).

Orig Pub : Tr. Turkm. s.-kh. in-ta, 1957, 9, 323-326

Abstract : It was demonstrated that at the beginning of the camels becoming sick with trypanosomosis, the blood's sugar content rises to 230-277 mg percent (in healthy camels the blood's sugar content amounts to 60-139 mg percent). Subsequently, its content decreases and reaches 56-66 mg percent. Simultaneously with its increase in blood, an increase of the sugar's quantity is observed in the cerebrospinal fluid. When the animals are treated with

Card 1/2

USSR/Diseases of Farm Animals - Diseases Caused by Protozoa

R

Abs Jour : Ref Zhur Biol., No 5, 1959, 21428

naganin, the blood picture is restored with the progress of their recovery. The sugar content, however, remains low for a long period of time returning to normal 80-90 days later. -- From the author's summary.

Card 2/2

- 32 -

KAMINSKIY, V.S., kand. tekhn. nauk; SOKOLOVA, M.A., kand. tekhn. nauk

Preparation of Tkibuli coals by the centrifugal method. Obog. 1
brik. ugl. no.7:16-23 '58. (MIRA 12:7)

(Tkibuli--Coal preparation) (Centrifuges)

DUKEL'SKIY, Aleksandr Iosifovich, prof., doktor tekhn.nauk; SOKOLOV,
Mark Aleksandrovich, dotsent; SANDLER, N.V., red.; DROZHZHINA,
L.P., tekhn.red.

[Mechanization of loading and unloading operations] Mekhanizatsia
peregruzochnykh rabot v morskikh portakh. Izd.2., perer. Lenin-
grad, Izd-vo "Morskoi transport," 1959. 302 p. (MIRA 13:3)
(Harbors) (Cargo handling)

STRONGIN, Semen Grigor'evich; SOLOVA, M.I., red.

[Present-day methods of calculating elements in industrial construction and civil engineering; a manual for groups improving their qualifications] Sovremennye metody rascheta konstruktsii v promyshlennom i grazhdanskom stroitel'stve, uchebnoe posobie dlia grupp povyseniia kvalifikatsii. Moskva, Voen. zachnyi stroitel'nyi tekhnikum, 1963. 154 p. (MIRA 1719)

PROCESSES AND PROPERTIES INDEX																									
<p>ca</p> <p>Recovery of metallic tin from its chlorides G. G. Tra- rov and M. A. Sobolev. — <i>Bull. acad. sci. U. R. S. S. S.</i> <i>Classe sci. chim.</i>, 1940, No. 5, 739-49 (in English, 749-59). The systems $Zn + SnCl_2 \rightarrow Sn + ZnCl_2$ and $Zn + SnCl_4 \rightarrow ZnCl_2 + SnCl_2$ were investigated by thermal analy- sis. The reaction of Zn with $SnCl_4$ is irreversible and rapid. The reduction of $SnCl_4$ by passing $SnCl_4$ vapors through fused metallic Zn did not give satisfactory results. With liquid $SnCl_4$ and fused Zn at 450° Sn is formed directly without intermediate formation of $SnCl_2$. There are formed an upper layer of pure $ZnCl_2$ and a lower layer of a Sn-Zn alloy. Tin can be recovered from the lower layer by treating the fused alloy with $SnCl_4$. 4 references. English summary. S. Machelson</p>																									
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>13313702</p>																									

1ST AND 2ND ORDERS

PROCESSING AND PROPERTIES INDEX

2

CA

Investigation of the system $\text{AgCl} + \text{PbS} = \text{PbCl}_2 + \text{Ag}_2\text{S}$ by methods of thermal analysis and microstructure. G. G. Urasov and M. A. Bolokova. *Ann. sector anal. phys. chim., Ind. chim. fiz.* (U.R.S.S.) 14, 317-37 (1941).—The melting diagram of this system is characterized by 4 areas corresponding to the crystn. of the 4 components. The geometry of the diagram indicates that at high temps. when the components are in a molten state the equil. of $\text{AgCl} + \text{PbS} = \text{PbCl}_2 + \text{Ag}_2\text{S}$ is changeable. As the temp. is lowered, the equil. shifts to the right; when the melt solidifies, the reaction is complete to the right. The diagram further indicates that the reaction products can form either of the 3 ternary systems PbCl_2 , Ag_2S , and AgCl , or PbCl_2 , Ag_2S , and PbS . Each of these ternary systems is characterized by 3 areas each of which represents the crystn. of the individual components. These 3 areas in each case meet in a single point, which is the eutectic for the given 3 components. For the system PbCl_2 - Ag_2S - AgCl the eutectic, m. 210° , has the compn. PbCl_2 54, Ag_2S 2.4, and AgCl 43.6 mol. %. The eutectic of the 2nd system m. 423° and has the compn. PbCl_2 57.0, Ag_2S 11.3, and PbS 31.7 mol. %. The results show that AgCl and PbS cannot coexist. Thus, when PbS and Ag_2S are chlorinated, the former should be chlorinated first and then the Ag_2S . M. Hoesch.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM SOURCE

RECORD NO. ONLY ONE

RECORD NO. ONLY ONE

STANDARD INDEX

PROCESSING AND PROPERTY INDEX

STUDY OF THE EXCHANGE REACTION $Zn + PbCl_2 \rightleftharpoons Pb + ZnCl_2$ BY THERMAL ANALYSIS. G. G. Frazov and M. A. Sokolova (*Zhur. Obshch. Khim.*, 1914, 14, (1-2), 10-50). [In Russian.] The reaction between zinc and lead chloride proceeds practically to completion in the direction of forming lead and zinc chloride. N. A.

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

RELATIONS

SOKOLOVA, M.A.

Study of $\text{SnS} + \text{Fe} \rightleftharpoons \text{Sn} + \text{FeS}$ reaction at high temperatures.
Izv. Sekt. fiz. khim. anal. 18:186-200 '49. (MIRA 11:4)

1. Institut obshchey i neorganicheskoy khimii im. M.S. Kurnakova
AN SSSR.

(Iron) (Tin sulfide) (Systems (Chemistry))

SOKOLOVA, M. A.

27 27 27 27

✓ The system $\text{BiCl}_3 + 3\text{Ag} \rightleftharpoons 3\text{AgCl} + \text{Bi}$. M. A. Sokolova. *Izvest. Sektora Fiz. Khim. Anal., Inst. Obshchei i Neorg. Khim., Akad. Nauk U.S.S.R.* 21, 159-71(1952). — The system $\text{BiCl}_3 + 3\text{Ag} \rightleftharpoons 3\text{AgCl} + \text{Bi}$ was studied by the thermal-analysis and microstructure methods in order to det. the conditions for sepn. of Bi from Ag. The reaction considered is partially reversible and the equil. is displaced toward the formation of AgCl-Bi . When fused, metals and chlorides formed mix only slightly: there is a metallic layer at the bottom and a layer consisting of chlorides at the top. These two layers can be sepd. The region of sepn. occupies a major part of the phase diagram in the form of an irregular pentagon. The best yield of Bi is obtained when BiCl_3 is in an excess close to the diagonal AgCl-Bi . Max. purity of Bi is then 95 at. %. In the system $\text{BiCl}_3\text{-Bi}$ an unstable compd. BiCl is formed in the region of sepn. At the temp. of initial crystn. (320°) the bottom layer contains 97 at. % Bi and the top layer 50 at. % Bi. BiCl is partially decompd. into BiCl_3 and metallic Bi.

A. Libuckay

SOKOLOVA, M.A.

SOKOLOVA, M.A.; URAZOV, G.G.; KUZNETSOV, V.G.

Study of the system $\text{BiCl}_3 - \text{Bi}$. Khim.redk.elem. no.1:102-114
'54. (MIRA 8:3)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
AN SSSR.
(Bismuth)

URAZOV, G.G.; SOKOLOVA, M.A.

Study of the system Bi - BiBr₃. Izv.Sekt.fiz-khim.anal. 24:151-159
'54. (MIRA 8:4)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
Akademii nauk SSSR.
(Bismuth)

URAZOV, G.G.; SOKOLOVA, M.A.

Study of the system: Bi --- BiI₂. Izv.Sekt.fiz.-khim.anal. no.25:
117-127 '54. (MIRA 8:5)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
Akademii nauk SSSR.
(Bismuth) (Iodides)

SOKOLOVA, M.A.

7
1124. EXTRACTION OF PHENOLS FROM GENERATOR TARS. Sokolova, M.A.
(Nauch. Trud. Mosk. Tekhn. Inst. Legk. Prom. (Sci. Proc. Moscow Tech. Inst. Light Ind.), 1955, vol. 6, 70-74; abstr. in Chem. Abstr., 1957, vol. 51, 13362). Generator tar, containing 13.5% moisture has been dehydrated by distillation with benzene. By further distillation at 5 mm mercury, 42.6% of acid oils and 57.4% of pitch were obtained. The acid oils contained 62% phenols and 0.2% carboxylic acids. By acetylation, 9% of the -OH groups in the phenols were obtained. By direct treatment of raw tar with ammonium stearate, 55% of the phenols were obtained. C.A.

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4E3d
4E2e
11 4E4

NS MB

SOKOLOVA, M.A.

Study of the system: Ni - S (from 30,0 to 50,0 atomic % S). Zhur. neorg.
khim. 1 no. 6: 1440-1454 J. '56. (MLRA 9:10)

(Nickel sulfides)

Sokolova, M.A.

✓ The nickel-sulfur system having 30-50 atomic % sulfur.
M. A. Sokolova. *Proc. Acad. Sci. U.S.S.R., Sect. Chem.*
106, 59-62 (1953) (English translation).—See C.A. 50,
10502g. B.M.R. *Chem.* L
m

Sokolova, M.A.

USSR/ Chemistry

Card 1/1 Pub. 22 - 30/54

Authors : Sokolova, M. A.

Title : Investigation of the Ni - S system from 30.0 to 50.0 at. % of S

Periodical : Dok. AN SSSR 106/2, 286-289, Jan 11, 1956

Abstract : The Ni-S system was investigated at concentrations ranging from 30.0 to 50.0 at. % S by means of thermal, microstructural, x-ray, pressure discharge, electro-conductivity and specific weight methods. The various phases of the Ni-S system were established. The existence of a NiS compound in two modifications was confirmed. The results obtained by the different methods are described. Nine references: 6 Germ., 2 Swedish and 1 Ital. (1908-1947). Diagrams.

Institution : Acad. of Sc., USSR, Inst. of Gen. and Inorgan. Chem. im. N. S. Kurnakov

Presented by: Academician G. G. Urazov, May 10, 1955

Sokolova, M. A.

82076

S/190/60/002/01/04/021
B004/B061

5.3830A

AUTHORS:

Ivanov, V. S., Sokolova, M. A., Aver'yanov, S. V.,
Yevdokimov, V. F., Gurlyand, I. S.

TITLE:

Radiation Polymerization of Isoprene. I.

PERIODICAL:

¹⁹ Vysokomolekulyarnyye soyedineniya, 1960. Vol. 2, No. 1.
pp. 35-37

TEXT: The aim of this work was to obtain data on the action of the conditions of irradiation with gamma rays of Co^{60} on the polymerization of isoprene. Pure isoprene was irradiated in glass ampoules in an experiment in the apparatus PVT-400 (GUT-400, 142 gram equivalent of radium), in further tests in the apparatus K-1400 (K-1400, 1400 gram equivalent of radium) at room temperature in a nitrogen atmosphere. The molecular weight of the polymers was determined viscometrically. X and the microstructure (containing 1,2-, 3,4- and 1,4-bonds) by infrared spectra (taken with a MKC-6 (IKS-6) spectrometer). The results are given in a Table. One polymer was obtained by the action of

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Radiation Polymerization of Isoprene. I.

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gamma rays of Co^{60} whose yield is directly proportional to the radiation dose, with small fluctuations of the radiation intensity. The microstructure of the polymer in the temperature range 40 - 20°C is independent of the dose and intensity of radiation, and of the presence of a sensitizer (5 mole% CCl_4). The average molecular weight of the polymer rises when the radiation intensity is decreased. The authors thank G. S. Denisov for advice and help in taking the infrared spectra. There are 1 table and 4 references. 4 US

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED July 7, 1959

X

Card 2/2

SOKOLOVA, M.A.

3

S/576/61/000/000/020/020
E021/E120

AUTHORS: Kuznetsov, V.G., Yeliseyev, A.A., Shpak, Z.S.,
Palkina, K.K., Sokolova, M.A., and Dmitriyev, A.V.

TITLE: Study of the phase diagram and the electrical
conductivity of the phases of the Ni-S, Ni-Se and
Co-S systems

SOURCE: Soveshchaniye po poluprovodnikovym materialam, 4th.
Voprosy metallurgii i fiziki poluprovodnikov;
poluprovodnikovyye soyedineniya i tverdyye splavy.
Trudy soveshchaniya. Moscow, Izd. vo AN SSSR, 1961.
Akademiya nauk SSSR. Institut metallurgii imeni
A.A. Baykova. Fiziko-tekhnicheskiy institut. 159-173.

TEXT: Information on the phase diagram and electrical
conductivity of the phases of the systems Ni-S, Ni-Se and Co-S
is important for the technology of extraction of nickel, cobalt,
selenium and sulphur from their ores and also for the search for
new semiconducting materials. The present investigation was
therefore carried out. Detailed X-ray analysis, differential
thermal analysis and measurements of density were carried out.

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3

Study of the phase diagram and the ... S/576/61/000/000/020/020
E021/E120

Electrical conductivity in the range 20 to 440 °C was measured, and in general showed a steady fall as the temperature increased. The results showed that in solid solutions based on β -NiSe or β -CoS with a defect nickel arsenide structure and a content of selenium or sulphur greater than 51.6 atomic %, a superlattice is formed. This is explained by ordering of defects in the lattice in Ni or Co positions. The following structures were found to exist: $\text{Ni}_4\text{S}_{32}\text{Se}_8$ - hexagonal with parameters at 650°C of $a = 5.43 \pm 0.01\text{kX}$, $c = 12.02 \pm 0.01\text{kX}$ and $c/a = 2.211$; Ni_9S_8 - hexagonal with $a = 12.10 \pm 0.1\text{kX}$, $c = 12.28 \pm 0.01\text{kX}$, $c/a = 0.932$ in a lattice of six Ni_9S_8 groups; Ni_6Se_8 - hexagonal with $a = 3.77 \pm 0.01\text{kX}$, $c = 15.86 \pm 0.02\text{kX}$, $c/a = 4.202$; $\text{Ni}_{21}\text{Se}_{20}$ - hexagonal with $a = 7.95 \pm 0.01\text{kX}$, $c = 9.76 \pm 0.01\text{kX}$, $c/a = 1.227$; β - $\text{Ni}_3\text{Se}_{20}$ - tetragonal with parameters at 650 °C of $a = 7.60 \pm 0.01\text{kX}$, $c = 6.22 \pm 0.01\text{kX}$, $c/a = 0.818$.

It was shown that NiS_2 has semiconducting properties. The phases β -NiS, β -NiSe and β -CoS with a nickel-arsenide structure and β -CoS, β -NiSe with a nickel-arsenide superlattice, and also

Card 2/4

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S/576/61/000/000/020/020
E021/E120

Study of the phase diagram and the ...

α NiS with a millerite-type structure, behave below 300 °C as semi-metals, but β' CoS with 55.22 at.% S and β' NiSe with 52.3 at.% Se have a tendency to semiconducting type of conductivity. The phases α Ni₃S₂, α Ni₃Se₂, Co₉S₈, NiSe₂ and mixtures of α Ni₃S₂ with Ni, α Ni₃Se₂ with Ni and Ni₆Se₅, Co₉S₈ with Co, have metallic conductivity. The c/a ratio is close to the ideal nickel-arsenide structure in the case of β NiS (c/a = 1.555) but the tendency to semiconducting properties is greater for β' CoS (c/a = 1.534) and β' NiSe (c/a = 1.463). This is a deviation from the prediction by W.B. Pearson (Ref.20: Canadian J. of Physics, 1957, v.35, 8, 886) that phases with nickel-arsenide structure would have semiconducting type of electrical conductivity. Detailed information is given on the limits of homogeneity and phase structure of Ni-S, Ni-Se and Co-S systems and also the interatomic distances in sulphides and selenides of nickel and cobalt selenide.

There are 2 figures, 2 tables and 32 references: 7 Soviet-bloc and 25 non-Soviet-bloc.

Card 3/4

3

Study of the phase diagram and the ... S/576/61/000/000/020/020
E021/E120

The four most recent English language references read as follows:

Ref. 7: T. Rosenqvist, J. Iron Steel Inst., 1954, v.176, 37.

Ref.16: M. Hansen. Constitution of Binary Alloys, 1958,
2nd publication.

Ref.20: W.B. Pearson, Canadian J. of Physics, 1957, v.35, 8, 886.

Ref.23: M.A. Peacock, Amer. Mineralog., 1947, v.32, 484.

Card 4/4

KUZNETSOV, V.G.; SOKOLOVA, M.A.; PALKINA, K.K.; POPOVA, Z.V.

Cobalt-sulfur system. Izv. AN SSSR. Neorg. mat. i no.5:675-689 My
'65. (MIRA 18:10)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN
SSSR.

SOKOLOVA, M.D.

Lentinus lepideus (Burb. Fr., a destroyer of wood. Ukr. bot. zhur.
15 no.2:96-98 '58. (MIRA 11:6)

1. Institut botaniki AN URSR, viddil mikologii.
(Kiev Province--Wood-decaying fungi)

SOKOLOVA, M.D.

New Ukrainian species of fungi from the Fungi Imperfecti. Ukr.
bot.zhur. 16 no.6:83-84 '59. (MIRA 13:5)

1. Institut botaniki AN USSR, otdel mikologii.
(Ukraine--Deuteromycetes)

SOKOLOVA, M.P.

New and little-known species of fungi in the flora of the Ukrainian
S.S.R. Ukr. bot. zhur. 20 no.4:111-113 '63. (MIRA 17:4)

1. Institut botaniki AN UkrSSR, laboratoriya mikologii.

KAZANSKIY, Yu.F.; FEROZIO, G.N.; SOKOLOVA, M.F.

Epigenetic montmorillonite from Mesozoic deposits of the West
Siberian Lowland. Dokl. AN SSSR 135 no.4:948-950 '60. (MIRA 13:11)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki
i mineral'nogo syr'ya i Institut geologii i geofiziki Sibirskogo
otdeleniya Akademii nauk SSSR. Predstavleno akademikom N.M.Strakhovym.
(Siberia, Western--Montmorillonite)

KAZANSKIY, Yu.P.; SOKOLOVA, M.F.

Kaolinite minerals in Upper Cretaceous and Paleogene deposits in
the middle Ob' Valley. Geol. i geofiz. no.11:23-29 '61.

(MIRA 15:2)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR
i Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki
i mineral'nogo syr'ya, Novosibirsk.

(Ob' Valley--Kaolinite)

SOKOLOVA, M.F.

Quantitative analysis of plankton in open and shore waters of
Neva Bay. Uch.zap.Len.un. no.126:67-106 '49. (MLRA 9:6)

1.Laboratoriya gidrobiologii Biologicheskogo instituta.
(Neva Bay--Plankton)

YARUSOV, S.S. ; SOLOLOVA, M.F.

Grasses

Lime and organic matter as factors in the growth of perennial grasses on sour soils.,
Sov. agron., 10, no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952 UNCLASSIFIED

DULETOVA, T.A.; ASTANKOVA, N.S.; VOLNENKO, N.K.; KULAGIN, Yu.V.; SOKOLOVA, M.F.

Synoptic aerological conditions of the formation of fogs according to
the data of Kazakhstan. Trudy KazNIGMI no.11:103-121 '59.

(MIRA 13:6)

(Kazakhstan--Fog)

SOKOLOVA, M.G.; SHAKH, K.F., tekhnik

Polyacrylamide is an efficient coagulation agent in
papermaking. Bum.prom. 37 no.11:24-25 N '62. (MIRA 15:11)

1. Nachal'nik laboratorii Znamenskoy bumazhnoy fabрики.
(Acrylamide) (Woodpulp)

Sokolova, M. I.

PHASE I BOOK EXPLOITATION 330,3310

Moscow. Gosudarstvennyy soyuznyy zavod. Byuro tekhnicheskoy informatsii

Sbornik materialov po vakuunnoy tekhnike, vyp. XIV (Collection of Articles on Vacuum Engineering, No. 14). Moscow, Gosenergoizdat, 1956. 103 p. 500 copies printed.

Eds.: R.A. Nilenier, Chief Engineer of the Plant (General Ed.); A.G. Aleksandrov, V.D. Vladimirov; Ed. I.L. Igiltayn; Tech. Ed.: K.P. Voronin.

PURPOSE: This collection of articles is intended for specialists in vacuum technology and electronics.

COVERAGE: The collection contains five papers on electron tubes written by the engineering personnel of the Gosudarstvennyy soyuznyy zavod (State Union Plant). No personalities are mentioned. References accompany all but one of the articles.

Parusnikov, V.M., V.S. Nikolayeva, and M.I. Sokolova. Production of Tungsten Wire 5 to 8 Microns in Diameter by the Electrolytic Etching Method

This paper deals with the work done at the refractory metals section of the plant in obtaining very thin tungsten wires by electrochemical etching. This metal fiber is needed for production of grids in a new type of receiving tube, for development of precision optomechanical instruments, and for other purposes. The first samples and experimental lots of this wire were produced in 1949 and 1950. These first samples were 8 microns in diameter. Later, with improved equipment, 5 micron fiber was obtained in regular factory production lots. According to non-Soviet data, wire 3 microns in diameter has been produced under laboratory conditions in the United States. A description of the etching process, the equipment used, and some characteristics of the wire, are given.

51

Dizman, A.M. Equipment for Measuring Conversion Transconductance The author describes equipment developed by himself and B.I. Jenkin for measuring conversion transconductance in 1A1P and 1A2P type tubes. The general testing capacity of the equipment is 300 to 350 tubes per hour.

68

KORABEL'NIKOV, I.D., prof.; SOKOLOV, M.I.

One thousand resections of the stomach with a single-row suture.
Khirurgiia 35 no.7:128-132 JI '59. (MIRA 12:12)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. I.D. Korabel'nikov) Chelyabinskogo meditsinskogo instituta i khirurgicheskogo otdeleniya bol'nitsy (glavnyy khirurg M.I. Sokolov) g. Zlatuosta.
(GASTRECTOMY)

SOKOLOVA, M.I.

Study of the system $\text{BiCl}_3 + 3\text{Ag} \rightleftharpoons 3\text{AgCl} + \text{Bi}$. Izv.Sekt.fiz.-khim.anal. 21:
159-171 '52. (MLBA 6:8)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova Akademii
nauk SSSR. (Systems (Chemistry)) (Bismuth) (Electrometallurgy)

BARABASHCHUK, O.V.; BAKHMUT, P.G. [Bakmut, P.H.]; GUBINA, K.M. [Hubina, K.M.]; DEMYANKO, M.D.; KALITA, S.M.; KARACHEMTSEVA, L.S.; KON-
DRAT'YEVA, V.I.; KORZACHENKO, M.N.; LITVINOVA, N.M. [Litvienova, N.M.]; SOKOLOVA, M.I.; STORONSKAYA, O.Y. [Storons'ka, O.I.];
TRINKINA, N.V.; TONKIKH, P., otv. za vypuska; MARCHENKOV, S., red.;
KURITSA, G. [Kuritsa, H.], tekhn.red.

[Economy of Drogo bych Province; statistical collection] Narodne
hospodarstvo Drohobys'ts'koi oblasti; statystychnyi zbirnyk. Drohobych,
1958. 158 p. (MIRA 12:11)

1. Drogo bych (Province) Statisticheskoye upravleniye. 2. Statisti-
cheskoye upravleniye Drogo bychskoy oblasti (for all except Tonkikh,
Marchenkov, Kuritsa).

(Drogo bych Province--Statistics)

KRAVCHIK, E.D., inzh.; SOKOLOVA, M.I., inzh.

Asynchronous motors with powder aluminum stator winding.
Elektrotehnika 35 no.1:36-37 Ja '64. (MIRA 17:2)

SOKOLOVA, M.K., meditsinskaya sestra (Moskva)

Diet for sick infants. Med.sestra 15 no.3:28-29 Mr '56. (MLRA 9:6)
(DIET IN DISEASE) (INFANTS--NUTRITION)

37909

S/054/62/000/002/005/012
B163/3138

9,2180

AUTHORS: Abolin'sh, Ya. Ya., Sokolova, M. M., Shultin, A. A.
TITLE: The spectral distribution of the opto-acoustic effect in Seignette's salt in the region $2000-6000 \text{ cm}^{-1}$
PERIODICAL: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 2, 1962, 66-68

TEXT: Earlier experiments by Gross, Abolin'sh, and Shultin (ZhTF, 26, 2255, 1958) on the observation of the opto-acoustic effect with intermittent white light are extended to an investigation of its spectral distribution. A crystal plate (X-cut) of Seignette's salt is irradiated with modulated infrared radiation from a globar radiation source through a prism-spectrometer ЖКС-6 (IKS-6) with a rock salt prism as monochromator. Electric charges appear on the faces perpendicular to the X-section when the crystal is irradiated. The corresponding voltage, which varies with the modulation frequency, is amplified and the spectrum of the opto-acoustic signal is recorded with a potentiometer ПСР 1-01 (PSR 1-01). The spectrum is corrected for the spectral intensity distribution of

Card 1/1

The spectral distribution of the ...

S/054/62/000/002/005/012
E163/E138

the radiation source. It has some distinct maxima which correspond to optical excitations of intramolecular oscillations. This interpretation is consistent with the assumption that the opto-acoustic effect is due to non-radiative transitions from optically excited intramolecular oscillations to the lattice. The table gives an interpretation of the maxima in the spectrum of the opto-acoustic signal. There are 2 figures and 1 table.

SUBMITTED: January 29, 1962

Card 2/02

SOKOLOVA, M.M.

SOKOLOVA, M.M.

Development of an extinguishing inhibition in narcotization and its relation to the persistence of conditioned reflexes. Fiziol. zhur. 40 no.6:661-667 N-D '54. (MLRA 8:2)

1. Kafedra normal'noy fiziologii Pediatricheskogo meditsinskogo instituta, Leningrad.

(REFLEX, CONDITIONED,

eff. of ethyl alcohol on extinguishing inhib. & reflex resist. in animals)

(ALCOHOL, ETHYL, effects,

on conditioned reflex resist. & extinguishing inhib. in animals)

SOKOLOVA, M.M.

Reaction to stress of the adrenal cortex in newborn animals [with
summary in English]. Biul. eksp. biol. i med. 44 no.10:44-46 0 '57.
(MIRA 11:2)

1. Iz laboratorii evolyutsii sekretornykh i vydelitel'nykh protsessov
(zav. - chlen-korrespondent AMN SSSR A.G.Ginetsinskiy) Instituta
evolyutsionnoy fiziologii imeni I.M.Sechenova (dir. - akademik L.A.
Orgeli) Akademii nauk SSSR. Predstavlena akademikom L.A.Orbeli.

(STRESS, effects,

on adrenal cortex in newborn animals, eosinophil count)

(ADRENAL CORTEX, physiology,

eff. of stress in newborn animals, eosinophil count)

(EOSINOPHIL COUNT,

eff. of stress in newborn animals)

GINETSINSKIY, A.G., VASIL'YEVA, V.F., ZAKS, M.G., SOKOLOVA, M.M., SOO, V.A.

Method for determining changes in elasticity of the female breast.

Akush. i gin. 34 no.5:104-106 S-0 '58

(MIRA 11:10)

1. Iz Instituta akusherstva i ginekologii (dir. - chlen-korrespondent
AMN SSSR P.A. Beloshapko) AMN SSSR i Institut evolyutsionnoy fiziologii
imeni I.M. Sechenova (dir. - akad. L.A. Orbeli) AN SSSR.

(BREAST, physiol.

capacity furot., method of determ. (Rus))

IVANOVA-BERG, M.M.; SOKOLOVA, M.M.

Seasonal changes in blood composition of fresh-water lampreys
(*Lampetra fluviatilis* L.). Vop. ikht. no.13:156-162 '59.
(MIRA 13:3)

(Lampreys) (Blood--Analysis and chemistry)

VASIL'YEVA, V.F.; LICHKO, A.Ye.; SOKOLOVA, M.M.

Mechanism of controlling insulin coma by intravenous infusions
of glucose. Biul. eksp. biol. i med. 48 no.9:46-50 S '59.

(MIRA 13:1)

1. Iz Instituta evolyutsionnoy fiziologii imeni I.M. Sechenova
(direktor - akademik L.A. Orbeli [deceased]) AN SSSR, Leningrad.
Predstavlena akademikom L.A. Orbeli [deceased].

(INSULIN)

(GLUCOSE)

SOKOLOVA, M.M.

Effect of acetylcholine on sorptive properties of the muscle tissue.
Mat. po evol. fiziol. 4:173-178 '60. (MIRA 13:10)
(ACETYLCHOLINE) (MUSCLE) (SORPTION)

ITINA, N.A.; SOKOLOVA, M.M.

Excitability and lability of muscle fibers growing outside the
organism. Mat. po evol. fiziol. 4:179-184 '60. (MIRA 13:10)
(TISSUE CULTURE)

ZAKS, M.G.; SOKOLOVA, M.M.

Role of potassium in the adaptation of lugworm tissues to hypotonic media. TSitologiya 2 no.4:448-453 J1-Ag '60. (MIRA 13:9)

1. Laboratoriya evolyutsii vydelitel'nykh i sekretornykh protsessov Instituta evolyutsionnoy fiziologii AN SSSR, Leningrad.
(POTASSIUM CHLORIDE—PHYSIOLOGICAL EFFECT) (POLYCHAETA)

ZAKS, M.G.; SOKOLOVA, M.M.

Mechanisms of adaptation to changes in the salinity of water in the
sockeye salmon (*Oncorhynchus nerka* (Walb.)). Vop.ikht. 1 no.2:333-
346 '61. (MIRA 14:6)

1. Laboratoriya evolyutsii vydelitel'nykh protsessov Instituta
evolyutsionnoy fiziologii imeni I.M.Sechenova AN SSSR.
(Pacific Ocean—Salmon) (Salinity) (Adaptation (Biology))

ZAKS, B.G.; SOKOLOVA, N.N.

Immunological serological distinctions between individual red salmon
stocks. Vop. ikht. i no. 4:707-715 '61. (MIRA 14:12)

I. Institut evolyutsionnoy fiziologii imeni I.M.Sechenova
AN SSSR, Laboratoriya vydelitel'nykh protsessov, Leningrad.
(BISTRAYA RIVER (KAMCHATKA) SALMON)
(SERUM DIAGNOSIS)

DUBNOV, M.V.; SOKOLOVA, M.M.

Effect of laparotomy on renal function in gynecological patients.
Akush.i gin. 37 no.2:84-89 F '61. (MIRA 14:3)

1. Iz otdeleniya operativnykh metodov lecheniya (zav. - prof.
M.V. Dubnov) Instituta akusherstva i ginekologii AMN SSSR
(dir. - chlen-korrespondent AMN SSSR prof. P.A. Beloshapko) i
Instituta evolyutsionnoy fiziologii imeni I.M. Sechenova AN
SSSR (i.o. dir. - chlen-korrespondent AMN SSSR prof. A.G.
Ginetsinskiy).

(KIDNEY)

(ABDOMEN--SURGERY)

ZAKS, M.G.; SOKOLOVA, M.M.

Ontogenic and species characteristics of the glandula nasalis in
certain sea birds. Fiziol. zhur. 47 no. 1:108-114 Ja '61.

(MIRA 14:3)

1. From the Sechenov Institute of Evolutional Physiology, U.S.S.R,
Academy of Sciences, Leningrad.

(SEA BIRDS)

(GLANDS)

VII. IROV, Ya.A.; SONOLOVA, R.R.

Absorption of vital dyes by hair cells of the organ of Corti in the cochlea of the guinea pig under conditions of relative peace and during the action of sound stimuli. Dokl. AN SSSR 137 no. 1:236-239 Mar-Apr '61. (MIRA 14:2)

1. Institut evolyutsionnoy fiziologii im. I.M. Sechenova
Akademii nauk SSSR. Predstavleno akademikom I.I. Shmal'gauzenom.
(ABSORPTION (PHYSIOLOGY)) (LABYRINTH (EAR))
(SOUND—PHYSIOLOGICAL EFFECT)

ZAKS, M.G.; SOKOLOVA, M.M.

Establishing differences between individual schools of the sockeye salmon (*Oncorhynchus nerka* Wahlb.) by the precipitation reaction. Dokl. AN SSSR 139 no.6:1491-1494 Ag '61.
(MIRA 14:8)

1. Institut evolutsiomnoy fiziologii im. I.M. Sechenova
AN SSSR. Predstavleno akademikom V.N. Chernigovskim.

(SOVIET FAR EAST—~~SALMON~~)
(ANTIGENS AND ANTIBODIES)

ACCESSION NR: AT4042708

S/0000/63/000/000/0394/0397

AUTHOR: Petrukhin, V. G.; Sokolova, M. M.

TITLE: Morphological changes induced by acceleration

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963.
Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy konferentsii. Moscow, 1963, 394-397

TOPIC TAGS: acceleration effect, morphological change, transverse acceleration, dog, monkey

ABSTRACT: Dogs and monkeys were subjected to transverse accelerations in a series of four experiments. In the first series, dogs were subjected to transverse accelerations of 8 g for a period of 3 min. In the second series, they were subjected to 12 g for 1 min. In the third series, they were subjected to 12 g for 3 min. In the fourth series, male monkeys were subjected to 12 g for periods ranging from 3 to 5 min (depending on appearance of electrocardiographic changes). All animals were killed either immediately after the completion of the experiment or 1, 3, 7, 15, 30, and 60 days after the experiment. Morphological investigation

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ACCESSION NR: AT4042708

indicated that the changes in the animal organs in all four series were identical. Animals killed immediately after the experiment showed marked hemodynamic changes. Blood was congested in the righthand chambers of the heart, in the pulmonary artery, in the portal vein, in the brain, in the kidneys, and in the liver. The myocardium was almost bloodless. Animals which were killed a day after the experiment, or later, did not show these hemodynamic changes. Macroscopic changes were seen only in the lungs. Microscopic examination of the brain, one hour after the conclusion of the experiment, showed a mild edema of the brain matter and connective tissues. A day later, dystrophic processes appeared in ganglial cells (chromatolysis, swelling, vacuolization), including the formation of shadow cells. These changes reached their maximum on the third day. By the seventh to fifteenth days, the ganglial cells of the cortex of the brain had a normal appearance. The phenomena of proliferation of glial cells continued to hold in some cases up to thirty or even sixty days. In cardiac tissue, one hour after the experiment, along with anemia and edema of the connective tissue, eosinophilia of the muscle fibers appeared. After a day, the edema diminished, while phenomena of protein dystrophy increased. After the third day, dystrophic processes gradually diminished, and by the fifteenth day, the myocardium resumed its normal structure. The lungs of all animals, one hour after the experiment, showed a marked plethora, especially on the dorsal side. The majority of the animals also

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showed hemorrhages and edema. After one to three days, signs of the edema and the hemorrhages began to diminish, and by the seventh day the majority of the hemorrhages was reabsorbed. In the liver, by the end of one day, considerable venous congestion was observed accompanied by grainy and sometimes vacuolar dystrophy. Normal structure reappeared in the liver by the third to the seventh day. Plethora of the kidneys was observed an hour after completion of the experiment. Subsequently, grainy and sometimes vacuolar dystrophy developed in the epithelium of the convoluted canals. At the end of a month, however, no changes could be observed in the kidneys. The pathomorphological picture of the brain and the myocardium resembles changes encountered during hypoxia. Apparently, transverse accelerations cause a significant disruption of the supply of blood to the brain and to the myocardium. The majority of the changes in the morphological picture brought about by transverse accelerations, however, appears to be reversible

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Card 3/3

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AUTHOR: Natochin, Yu. V.; Sokolova, M. M.; Vasil'eva, V. F.; Balakhovskiy, I. S.

ORG: none

TITLE: Investigation of the kidney function of the Voskhod-1 crew

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TOPIC TAGS: human physiology, manned space flight, kidney function, water excretion, Voskhod 1, Komarov, Feoktistov, Yegorov

ABSTRACT: The kidney function of the Voskhod-1 crew was analyzed quantitatively and chemically. The subjects underwent tests in which they fasted between 1900 hr and 0700 hr. Urine samples were collected for this period. At 0700 they drank boiled water, constituting 2 percent of their body weight, for a period of 30 min. Urine was then collected at 30-min intervals for 2 hr. Chemical analyses consisted of: 1) the photometric determination (SF-4A apparatus) or creatinine in the urine and blood serum (glomerular filtration); 2) the flame photometric determination of blood and urine Na and K concentration; 3) the cryoscopic determination of liquid osmomolar concentration; 4) the Silber-Porter determination of 17-21 hydroxy-20-ketosteroids. The Smith method (H. Smith. Principles of Renal Physiology. N. Y., 1956) was used to quantitatively evaluate the osmoregulatory function of the kidneys. The results of these tests are given in Tables 1 and 2. It was concluded that the

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Table 1. Results of kidney function tests of the Voskhod-1 crew

Indices	V. M. Komarov			K. P. Feoktistov		B. B. Yegorov		
	Control 5.IX	2 days after flight 12.X	18 days after flight 1.XI	Control 5.IX	18 days after flight 1.XI	Control 5.IX	2 days after flight 12.XI	18 days after flight 1.XI
Nocturnal cycle								
1. Normal filtra- tion, ml/min	134	133	135	131	129	114	100	110
2. Osmotic urine concentration/plasma	3.45	3.8	3.3	3.9	2.8	1.65	2.5	1.9
3. Urine sodium con- centration, mg equiv/l	250	189	183	193	202	120	220	150
Water load								
4. % Water load excreted/2 hr	60	21	66	64	43	85	42	71
5. Maximum diuresis after water load, ml/min	14.0	2.7	15.9	12.7	11.2	15	12.2	14.8
6. Osmotic urine concentration/ plasma at heights of diuresis	0.26	0.93	0.19	0.18	0.46	0.17	0.26	0.25
7. Minimum urine sodium con- centration, mg equiv/l	15	30	5.9	7.8	12	6.9	5.0	5.7
8. CH_2O at the height of diuresis, ml/min	10.4	0.19	12.9	10.4	6.05	12.3	9.0	9.0

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Table 2. 17-oxycorticosteroid, potassium, and sodium excretion by the Voshkod-1 crew

Indices	Y. M. Komarov						K. P. Frohlov						B. B. Yegorov					
	Control			Before flight 11.X	After flight		Control			Before flight 11.X	After flight		Control			Before flight 11.X	After flight	
	1.IX	2.IX	1.X		14.X	15.X	1.IX	2.IX	1.X		14.X	15.X	1.IX	2.IX	1.X		14.X	15.X
17-OH steroids mg/day	6.4	8.8	6.5	6.7	8.5	3.7	4.8	3.0	8.5	5.5	5.8	3.7	5.8	2.8	4.1	3.6	7.4	2.5
17-OH steroids mg/g creatinine	3.5	4.8	3.2	3.5	4.0	2.1	2.9	1.7	4.7	2.9	3.1	2.0	4.1	1.7	2.2	2.3	4.0	1.4
K g/day	2.9	3.2	2.7	2.5	2.9	2.8	2.4	2.7	3.6	2.2	2.7	2.6	2.4	2.4	2.3	1.5	2.6	1.8
Na g/day	4.6	5.3	3.4	3.6	3.3	4.0	5.0	5.4	5.7	5.2	4.3	4.4	2.9	4.8	3.5	3.9	3.4	3.5
Ca/Na, g equiv.	0.36	0.35	0.44	0.4	0.5	0.4	0.27	0.29	0.36	0.24	0.36	0.34	0.44	0.29	0.4	0.22	0.44	0.3

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water excretion by the Voskhod-1 crew was altered 2 days after the flight, based on the fact that their ability to eliminate water was decreased. This functional shift normalized after 18 days. It is hypothesized that, under the effect of space-flight stresses and especially during weightlessness, the water regulatory system adjusts to what seems to be elevated water and salt levels which increases the rate of water elimination. Upon return to terrestrial conditions the reverse is true, and water elimination progresses more slowly. Orig. art. has: 2 tables. [CD]

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